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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,922	07/09/2001	Worthington B. Houghton JR.	155603-0195	7104

7590 11/18/2002

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EXAMINER

WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,922

Applicant(s)

HOUGHTON ET AL.

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10, 13-17, 19-22 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 11, 12, 18 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The information disclosure statement filed September 14, 2001 has been received.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14-17 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,779,010 Nelson.

Re-claim 14, Nelson discloses a vibration isolator, comprising: a housing 42 with an outer alignment means, such as bolt recesses; a support plate 40 that is aligned with the housing by bolts; a pendulum assembly is coupled to the support plate.

Re-claim 15, the pendulum assembly includes a cable 54 that is coupled to a piston 26 and the support plate, the piston in turn is coupled to the housing 42.

Re-claim 16, the housing has an inner alignment means, such as 70, dashpot 70 aligns the piston with the housing.

Re-claim 17, the housing includes an inner cylinder 22 which defines a first inner chamber and is located in a second inner chamber 46, the piston 26 is considered to be within the first inner chamber.

Re-claim 20, Nelson discloses a vibration isolator, comprising: a housing 42 with an inner alignment means, such as 70; a support plate 40; a piston 26 is aligned with the housing by the inner alignment means; a cable 54 is coupled to the piston and the support plate.

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Re-claim 21, the housing has an outer alignment means for aligning the support plate therewith.

Re-claim 22, the housing includes an inner cylinder 22 which defines a first inner chamber and is located in a second inner chamber 46, the piston 26 is considered to be within the first inner chamber.

4. Claims 14-16, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,071,108 to Houghton, Jr.

Re-claim 14, Houghton, Jr. discloses a vibration isolator, comprising: a housing 10 or 13 with an outer alignment means 32 or 34; a support plate 28 or 38 is provided with means 31 or 39 for aligning with the housing; a pendulum assembly 21 is coupled to the support plate. Houghton, Jr. discloses that piston 15 can be fitted with a pendulum assembly. This applies to either embodiment.

Re-claim 15, the pendulum assembly includes a cable 22 that is coupled to a piston 15 and the support plate, the piston in turn is coupled to the housing.

Re-claim 16, the housing in the embodiment of figure 2 is provided with an inner alignment means, the piston 15 has means such as 39 or 44 for aligning with the housing 10. The alignment means 34 of the housing is directly inwardly and outwardly.

Re-claim 20, Houghton, Jr. discloses a vibration isolator, comprising: a housing 10 with an inner alignment means 34; a support plate 38; a piston 15 has means 39 and 44 for aligning with the housing; a cable is coupled to the piston and the support plate.

Re-claim 21, the housing 10 has an outer alignment means 34 the support plate 38 has means for aligning with the housing, such as 39.

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5. Claims 25-29 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 95/01853 to Cocino.

Re-claim 25 and 26, Cocino discloses a method of aligning a support plate, comprising: releasing a fluid from a housing 1 of a vibration isolator such that a support plate 9 becomes seated within in non-circular seat of the housing; a payload is attached to the support plate. Cocino discloses that recessed seat 5 is rectangular, see page 2 line 24. The support plate 9 is fitted to the seat 5 when a fluid is released from chamber 7.

Re-claim 27 and 28, Cocino discloses a method for aligning a support plate 9 of a pneumatic vibration isolator, comprising: charging a housing 1 with fluid so that a piston 9 is seated within a non-circular seat 5 of a housing; a payload is attached to the support plate.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 1-4 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houghton, Jr. in view of US 3,057,003 to Sogoian.

Re-claims 1-4, Houghton, Jr. teaches a vibration isolator, comprising: a housing 10 or 13; a support plate 28 or 38; and a pendulum 21; the pendulum assembly includes a cable 22 coupled to a piston 15 and the support plate, the piston is turn is coupled to the housing. Houghton, Jr. teaches the housing as having an inner and outer seat, a support plate with a shoulder and a piston with an outer top surface. These surfaces are used to center the support plate and piston relative to the housing. Furthermore, Houghton, Jr. teaches a tapered connection between the seats and the support plate shoulder and piston surface.

However, Houghton, Jr. fails to teach the inner seat, the outer seat, the shoulder of the support plate, or the outer top surface of the piston as being non-circular. Sogoian teaches the use of a square profile to reduce the relative rotation of two engaging elements. It would have been obvious to one of ordinary skill in the art to have utilized the teachings of Sogoian regarding desire to reduce rotation between two elements, when having designed the inner seat the outer seat the shoulder and the outer top surface in Houghton, Jr. as non-circular, thus minimizing the possibility of rotation of the support plate or piston relative to the housing after a centering procedure has been completed.

Re-claims 8-10, Houghton, Jr. teaches a vibration isolator, comprising: a housing 13; a support plate 28; a piston 15; a cable 22 coupled to the piston and the support plate. Houghton, Jr. teaches the housing as having an inner seat 32, a support plate with a shoulder 31. These surfaces are used to center the support plate relative to the housing. Furthermore, Houghton, Jr. teaches a tapered surface connection between the inner seat and the support plate.

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However, Houghton, Jr. fails to teach the inner seat and the shoulder of the support plate as being non-circular. Sogoian teaches the use of a square profile to reduce the relative rotation of two engaging elements. It would have been obvious to one of ordinary skill in the art to have utilized the teachings of Sogoian regarding desire to reduce rotation between two elements, when having designed the inner seat and shoulder of Houghton, Jr. as non-circular, thus minimizing the possibility of rotation of the support plate or piston relative to the housing after a centering procedure has been completed.

9. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houghton, Jr. in view of Sogoian and in view of US 5,779,010 to Nelson.

Re-claims 7 and 13, Houghton, Jr. teaches a piston 15. However, Houghton, Jr. is silent regarding the types of pistons that can be used, such as a piston having a hollow interior for receiving a damping fluid. Nelson teaches a piston 26 having a hollow interior. It would have been obvious to one of ordinary skill in the art to have provided the device of Houghton, Jr. with a hollow piston as taught by Nelson, thus reducing overall weight of the vibration isolating device. Furthermore, it is the position of the examiner that the specific type of piston used in the device of Houghton, Jr. is left to the artisan as one of choice based upon economics or availability.

10. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houghton, Jr. in view of Nelson.

Re-claims 19 and 24, Houghton, Jr. teaches a piston 15. However, Houghton, Jr. is silent regarding the types of pistons that can be used, such as a piston having a hollow interior for receiving a damping fluid. Nelson teaches a piston 26 having a hollow interior. It would have

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been obvious to one of ordinary skill in the art to have provided the device of Houghton, Jr. with a hollow piston as taught by Nelson, thus reducing overall weight of the vibration isolating device.

Allowable Subject Matter

11. Claims 5, 6, 11, 12, 18 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SU 317839 teaches complimentary contact surfaces 6 for centering a support member relative to a housing.

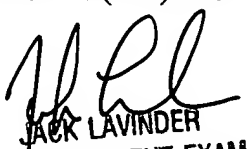
13. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

November 12, 2002


JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600
11/13/02